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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,668	10/17/2005	Herwig Buchholz	MERCK-2686-1	1550
23599 7590 12/06/2010 MILLEN, WHITE, ZELANO & BRANIGAN, P.C. 2200 CLARENDON BLVD. SUITE 1400 ARLINGTON, VA 22201				
EXAMINER				
BLAKELY III, NELSON CLARENCE				
ART UNIT		PAPER NUMBER		
1614				
NOTIFICATION DATE		DELIVERY MODE		
12/06/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@mwzb.com

### Office Action Summary

**Application No.**

10/553,668

**Applicant(s)**

BUCHHOLZ ET AL.

**Examiner**

NELSON C. BLAKELY III

**Art Unit**

1614

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 February 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 2, 6, 7, 9, 14, 16-18, 20-25, 28-32 and 35 is/are pending in the application.
- 4a) Of the above claim(s) 17, 18, 20-25 and 28-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6, 7, 9, 14, 16 and 35 is/are rejected.
- 7) ☒ Claim(s) 1 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-940)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Application Status***

Claims 1, 2, 6, 7, 9, 14, 16-18, 20-25, 28-32 and 35 of the instant application are pending. Claims 17, 18, 20-25 and 28-32 are withdrawn pursuant to Applicant's Amendment, filed 08/21/2009. Accordingly, instant claims 1, 2, 6, 7, 9, 14, 16 and 35 are presented for examination on their merits.

Applicant's Arguments, filed 02/15/2010, have been fully considered. Rejections/objections not reiterated from previous Office Actions are hereby **withdrawn**. The following rejections/objections are either reiterated or newly applied. They constitute the complete set of rejections presently being applied to the instant application.

### ***Applicant's Amendment***

Applicant's Amendment, filed 02/15/2010, wherein the specification and claim 14 are amended, claims 17, 18, 20-25 and 28-32 are withdrawn, claims 3-5, 8, 10-13, 15, 19, 26, 27, 33 and 34 are canceled, and claim 35 is added, is acknowledged.

### ***Claim Objections***

Claims 1 and 14 are objected to for the following informality:

With regard to instant claims 1 and 14, Applicant is encouraged to consider amending the aforementioned claims to recite "..., obtainable by agitating a suspension

comprising one or more inorganic pigments and silver oxide at 20-45 °C, ..." for the accuracy and precision of the claim language.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1, 2 and 6 were rejected under 35 U.S.C. 102(b) as being anticipated by Fu (International Publication No. WO01/60628A2; cited in a previous Office Action).

#### **Applicant's Arguments**

Applicant alleges that Fu discloses pigments which are coated with silver oxides, and are substantially different from those of the present claims. Further, Applicant alleges that, as disclosed in the specification, the present pigments do not contain silver oxide and/or contain silver silicates and/or silver titanates.

#### **Examiner's Response**

Applicant's Arguments, filed 02/15/2010, have been fully considered, but they are not persuasive.

The Examiner acquiesces with Applicant in that the coating, as disclosed by Fu, may comprise silver oxide. See reference page 4, lines 9-13, wherein Fu discloses that the marking oxides, e.g., silver oxide, may be used alone as the coating on mica flakes, or further mixed with titanium dioxide (TiO<sub>2</sub>), wherein the TiO<sub>2</sub> forms a host structure for the mixed oxide. It is acknowledged that instant claim 1 recites the transitional phrase "comprising", which allows for the inclusion of additional components in the coating.

Confusingly, Applicant recites wherein the present pigments do not contain silver oxide, for example. However, the product-by-process claim 1 recites an antimicrobial pigment obtainable by agitating a suspension comprising one or more inorganic pigments and silver oxide. It is noted that *In re Best* (195 USPQ 430) and *In re Fitzgerald* (205 USPQ 594) discuss the support of rejections wherein the prior art discloses subject matter which there is reason to believe inherently includes functions that are newly cited or is identical to a product instantly claimed. In such a situation, the burden is shifted to the Applicant to "prove that subject matter shown to be in the prior art does not possess characteristic(s) relied on" (205 USPQ 594, second column, first full paragraph). The rejection is **maintained**.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 2, 6, 7, 9, 14 and 16 were rejected under 35 U.S.C. 103(a) as being unpatentable over Fu (International Publication No. WO01/60628A2; cited in a previous Office Action), in view of Bagala, Sr. (U.S. Patent No. 7,045,007B2; cited in a previous Office Action), as evidenced by Seo *et al.* (*Cosmetics and Toiletries*®, Vol. 112, pages 83-90; 1997; cited by Applicant).

#### **Applicant's Arguments**

Applicant alleges that Fu discloses only silver oxides on a substrate, at best. Further, Applicant alleges that none of the references suggest a procedure which would

result in silver ions bonded to the surface of the substrate, rather than silver oxides precipitated therein and, for example, adhered by van der Waals forces.

Examiner's Response

Applicant's Arguments, filed 02/15/2010, have been fully considered, but they are not persuasive.

The Examiner acquiesces with Applicant in that the synthetic mica, as disclosed by Fu, may comprise silver oxide. Confusingly, Applicant argues that the present procedure results in silver ions bonded to the surface of the substrate. However, the product-by-process claim 1 recites an antimicrobial pigment obtainable by agitating a suspension comprising one or more inorganic pigments and silver oxide. Accordingly, it is noted that *In re Best* (195 USPQ 430) and *In re Fitzgerald* (205 USPQ 594) discuss the support of rejections wherein the prior art discloses subject matter which there is reason to believe inherently includes functions that are newly cited or is identical to a product instantly claimed. In such a situation, the burden is shifted to the Applicant to "prove that subject matter shown to be in the prior art does not possess characteristic(s) relied on" (205 USPQ 594, second column, first full paragraph). The rejection is **maintained**.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fu (International Publication No. WO01/60628A2; cited in a previous Office Action), in view of Seo *et al.* (Cosmetics and Toiletries®, Vol. 112, pages 83-90; 1997; cited by Applicant) and Jansen *et al.* (Angew Chem Int Ed Engl, Vol. 19, No. 5, pages 386 and 387; 1980).

With regard to instant claim 35, Fu discloses, in reference claims 1, 4 and 6, page 12, a laser sensitive pigment comprising at least one platelet-shaped substrate, e.g., synthetic mica particles (See reference claim 6 and page 3, lines 21 and 22 of the

reference specification), coated with a mixed metal oxide coating, wherein the said coating comprises a host component, e.g.,  $\text{TiO}_2$  (titanium dioxide), and a marking component, e.g.,  $\text{Ag}_2\text{O}$  (silver oxide).

Fu fails to disclose specifically wherein the inorganic pigment has antimicrobial properties. However, Seo *et al.* disclose, on page 83, second column, lines 3-9, that metals, e.g., silver, and their compounds, e.g., silver oxide, silver silicate and silver titanate, show antimicrobial activity. Further, on reference page 83, second column, lines 10-25, Seo *et al.* disclose wherein the antimicrobial mechanism of the metal ion is suggested by a theory that hinges on the oligodynamic action of ultrafine particles of metal ions, e.g., silver, which has been observed by researchers using high speed microscopy. See also page 14, lines 23-30 of the instant specification.

Fu fails to disclose specifically wherein the inorganic pigment comprises silver silicate, silver titanate or a mixture thereof. However, Jansen *et al.* disclose on page 386, first column, lines 1-3, wherein like many other silver-rich oxides, the disclosed silver silicates, of the reference, studied thus far also have characteristic silver substructures.

Therefore, a skilled artisan would have envisaged the instantly claimed antimicrobial pigment comprising silver silicate on the surface of one or more inorganic pigments, e.g., synthetic mica, as disclosed by Fu, in view of Seo *et al.* and Jansen *et al.* One of ordinary skill in the art would have been motivated to combine the teachings of the aforementioned references when seeking an antimicrobial pigment comprising other silver salts, e.g., silver silicate, wherein like many other silver-rich oxides (e.g.,



silver oxide), silver silicate also have characteristic silver substructures. It would have been obvious to one of ordinary skill in the art, at the time of the invention, because the combined teachings of the prior art are suggestive of the claimed invention.

Accordingly, the instant invention, as claimed in claim 35, is *prima facie* obvious over the combination of the aforementioned teachings.

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to NELSON C. BLAKELY III whose telephone number is (571) 270-3290. The Examiner can normally be reached on Mon - Thurs, 7:00 am - 5:30 pm (EST).

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Ardin H. Marschel can be reached on (571) 272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Phyllis G. Spivack/  
Primary Examiner, Art Unit 1614  
December 1, 2010

/N. C. B. III/  
Examiner, Art Unit 1614